TUKHVATULLIN, G.A.; PALEY, M.A., inzhener, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor

[A collection of problems in tolarances, clearances and calibrations] Sbornik zadach po dopuskam, posadkam i kalibram. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 95 p. (MLRA 9:11)
(Tolerance (Engineering)) [Microfilm]
(Calipers)

TUKHVATULLIN, G. A.

"A New Method of Knurling"
Stanki I Instrument, 17, No. 9, 1946

BR-52059019

TUKHVATULLIN, Gabdulla Akhmetovich; SHELKOV, N.I., red.; GARINA, T.D., tekhn. red.

[Problems in the technology of instrument manufacture]Zadachnik po tekhnologii instrumental'nogo proizvodstva. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 119 p. (MIRA 15:9)

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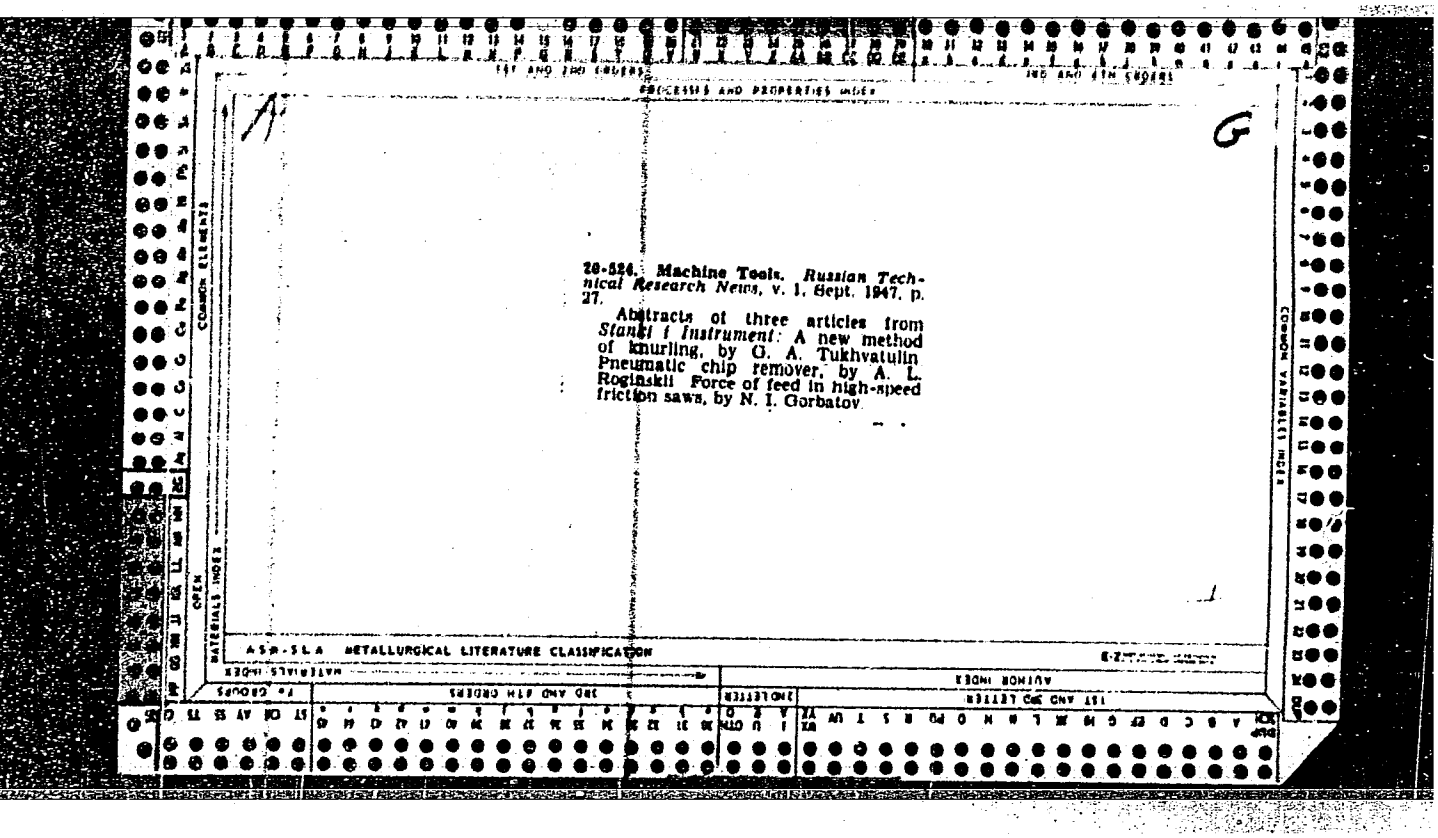

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Every fifth one. Prom.koop. 14 no.2:36 F '60.
(MIRA 13:5)
(Kazan--Technological innovations)

VOLKOVA, I.N.; LEBEDEV, K.V.; TUKHVATULLINA, L.V.

Influence of X-rays on the process of formation of a mediator in the sympathetic nervous system. Biul. eksp. biol. i med. 52 no.9:37-39 S '61. (MIRA 15:6)

1. Iz kafedry normal'noy fiziologii (zav. - prof. I.N. Volkova) i kafedry radiorentgenologii (zav. - prof. M.I. Gol'dshteyn) Kazanskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR A.V. Lebedinskim.

(SYMPATHINS)
(X RAYS—PHYSIOLOGICAL EFFECT)
(NERVOUS SYSTEM, SYMPATHETIC)

ZEFIROV, L.N.; TUKHVATULLINA, L.V.

Effect of 2-methylnaphthoquinone on the parasympathetic innervations and activity of the heart of cold-blooded animals. Biul. eksp. biol. i med. 49 no. 4:71-75 Sp '60.
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1. Iz kafedry fiziologii (zav. - doktor meditsinskikh anuk I.N. Volkova) Kazanskogo meditsinskogo instituta.
(VITAMIN S-K) (HEART)

TUKHVATULLINA, L.V.

Functional state of parasympathetic innervation of the heart in irradiated animals. Nauch. trudy Kaz. gos. med. inst. 14: 301-302 '64. (MIRA 18:9)

1. Kafedra fiziologii (zav. - prof. I.N.Volkova) Kazanskogo meditsinskogo instituta.

BAKIROV, K.Kh.; CHIMBULATOV, M.A.; TUKHVATULLIN, R.K.; POPONIN, I.R.

Possibilities of using breas of western Kazakhstan for obtaining petroleums. Trudy Inst. nefti AN Kazakh.SSR 4:69-72 '61. (MIRA 16:4)
(Kazakhstan--Tar)

KAMAY, Gil'm; KHARRASOVA, F.M.; TUKHVATULLINA, S.Yu.

n-Butyl ester of phenyltrichloromethylphosphinic acid. Trudy KKHTI no.30:18-21 '62. (MIRA 16:10)

KAMAY, Gil'm; KHARRASOVA, F.M.; SULTANOVA, R.B.; TUKHVATULLINA, S.Yu.

Action of carbon tetrachloride on alkyl esters of p-chlorophenyl-, p-isopropylphenyl-, and α-naphthylphosphinic acids. Zhur. ob. khim. 31 no. 11:3550-3554 N '61. (MIRA 14:11)

1. Kazanskiy khimiko-tekhnologicheskiy institut imeni S.M. Kirova.

(Phosphinic acid) (Carbon tetrachloride)

KAMAY, G. Kh.; KHARRASOVA, F. M.; SULTANOVA, R. B.;
TUKHVATULLINA, S. Yu.

Action of chloral on alkyl esters of p-chlorophenyl-, p-isopropylphenyl-, and α-naphthylphosphinous acids. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:759-762 '62.
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1. Kazanskiy khimiko-tekhnologicheskiy institut imeni Kirova, kafedra tekhnologii organicheskogo sinteza.

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TUKHVATULLINA, R.V.

Indicators of the physical development and the state of health of Kazan children of preschool age according to the materials of kindergarten inspection during 1961-1962. Nauch. trudy Kaz. gos. med. inst. 14:53-54 '64. (MIRA 18:9)

1. Kafedra detskikh bolezney (zav. - prof. Yu.V.Makarov) i kadefra organizatsii zdravookhraneniya s istoriyey meditsiny (zav. - prof. T.D.Epshteyn) Kazanskogo meditsinskogo instituta.

SHAMIS, D.L.; MASHEYEVA, R.Sh.; TUKIBAYEVA, A.A.

Mixed cultures of yeast used in bread baking. Report No.3. Trudy Inst. mikrobiol. i virus. AM Kazakh. SSR 7; 33-39 '63. (MIRA 16:12)

SHAMIS, D.L.; MASHEYEVA, R.Sh.; MORKOVCHANKO, L.D.; PIROGOVA, A.M.; TUKIBAYEVA, A.A.

Yeast Schizosaccharomyces Pombe in baking. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no.2:20-27 Mr-Ap '65. (MIRA 18:5)

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report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

Beneficiation of refractory clay by electroosmosis. I. I. Tukii, K. I. Tsymbova, and N. E. Marisma. Steklo i Keram., 8 (8) 10-12 (1951).

Electroosmosis for 6 hr. of 15 kg. clay yielded 19.5kg. clay having 42.6% moisture. An additional osmosis for 2 more hr. did not result in any improvement. On a commercial scale, yield was 80% but product contained 80% moisture. By increasing the current density, it should be possible to reduce the moisture to 40%. The best results were obtained without the addition of an electrolyte to the suspension; electrolytes diluted the suspension but caused electrolysis of the drum material and adulteration of the clay with Pb. Compared with ordinary clay, content of macrodisperse particles was less and change in plasticity was less sharp. Debiteuse made of clay and grog (45:55) treated by osmosis had a fire shrinkage of 15.0% and water absorption of 4.62-4.70% compared with 11.0% and 9.60-9.33% for ordinary debiteuse.

B. Z. K.

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APOSTOL, A.; TUKILA, I. [Toukila, I.]; DUMITRESKU, N. [Doumitreskou, N.]; SALDZHANU, A. [Saldjanou, A.]; VILEZHINSKIY, K. [Vileginsky, K.] (Bucharest)

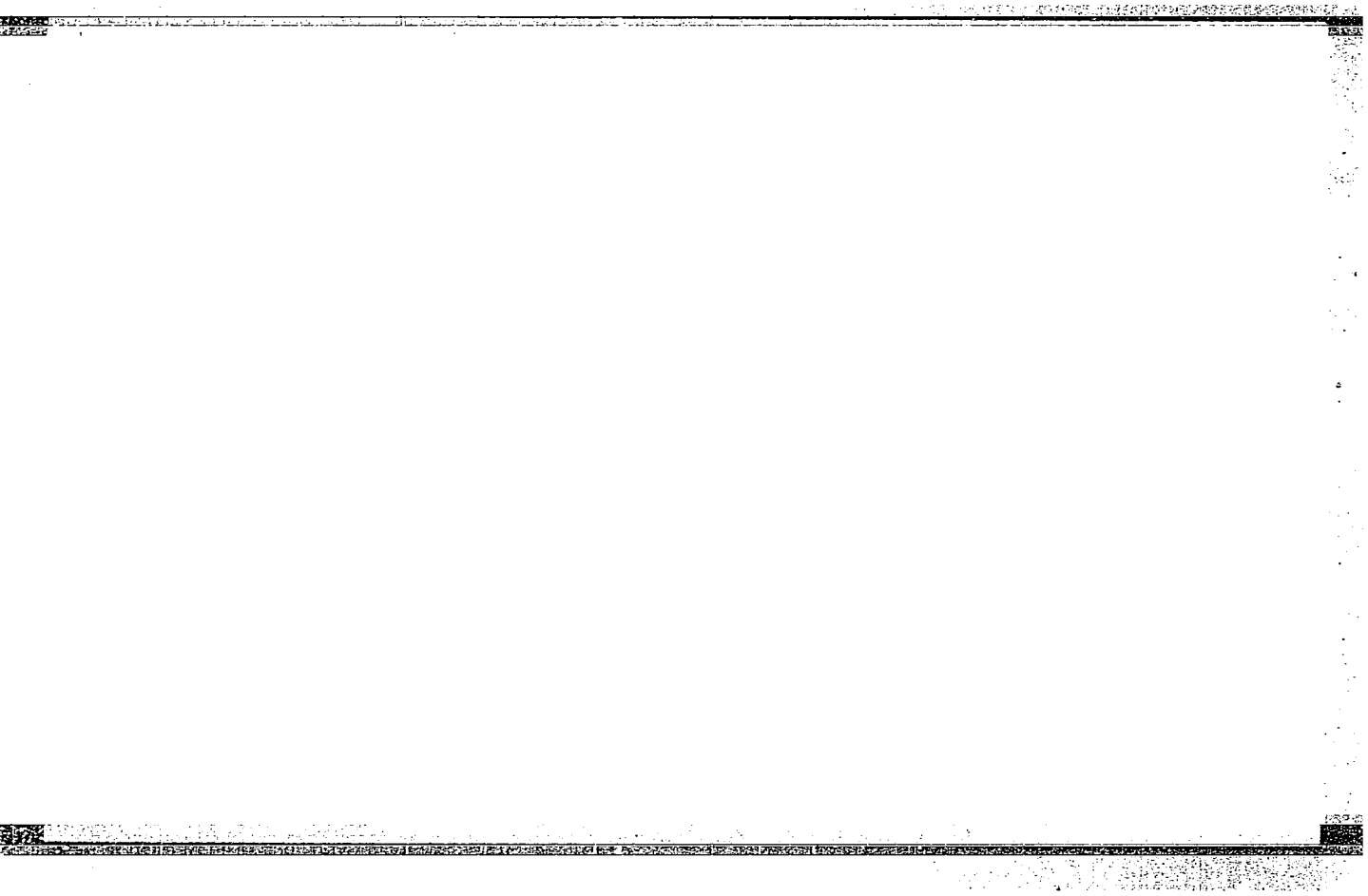
New data on pathogenesis of pulmonary tuberculoma in connection with bronchoglandular tuberculosis [with summary in French]. Probl.tub. 35 no.5:95-100 '57. (MIRA 10:11)

(TUBERCULOSIS, PULMONARY, pathol.
pathogen. of tuberculoma in connection with broncho-glandular tuberc.)

TUKINA, A.M.

Culdoscopy and laparoscopy in the diagnosis of ovarian tumors.
Vop. onk. 11 no.8:92-94 '65. (MIRA 18:11)

1. Kafedra akusherstva i ginekologii (zav. - zasluzhennyy deyatel' nauki RSFSR prof. V.A.Pokrovskiy) Voronezhskogo meditsinskogo instituta (rektor - dotsent I.P.Furmenko).



APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757410011-4"

AUTHORS: Dovzhenko, O. I., Zatsepin, V. I., Kurnina, Ye. P., Nikol'skaya, I. I., Tukish, Ye. 20-115-5-12/59

TITLE: Investigation of Extensive Atmospheric Showers of Cosmic Radiation (Issledovaniye shirokikh atmosfernykh liv' kosmicheskogo izlucheniya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5, pp. 899-902 (USSR)

ABSTRACT: In autumn 1955 the energetic characteristics of extensive atmospheric showers were investigated at an altitude of 3860 m above the sea level. The lay-out of the experimental equipment is illustrated in a diagram. Extensive atmospheric showers caused by primary particles with an energy of from $2 \cdot 10^{15}$ - 10^{16} eV were separated by fourfold discharges in two groups of counters (with a mutual distance of two meters). A number of about $4 \cdot 10^4$ extensive atmospheric showers were recorded. A great number of counters was employed in these measurements. The energy spectrum of the showers at a distance

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Investigation of Extensive Atmospheric Showers of Cosmic Radiation 20-115-5-12/59

from the shower axis not exceeding 10 m can be expressed in the form $\sim 1/E^{\gamma}$ in the energy interval of the rays of from E = 1,5 - 3,5 BeV. Here holds $\gamma = 0,27 \pm 0,06$. The authors report on the observations of the passage of shower cores through a detector for penetrating particles which was mounted at a depth of a water equivalent of 800 g/cm². The combined shower rate caused by primary particles with energy of $E > 6 \cdot 10^{10}$ eV completely agrees with the observed rate, whereas the observed shower rate caused by primary particles with $E > 6 \cdot 10^{11}$ eV is several times as high as the expected rate. The spectrum of the electron-photon component in the core parts of the here observed atmospheric showers was investigated by means of a great cloud chamber, that is to say for energies of from $2 \cdot 10^9$ - 10^{10} eV at a varying distance from the shower axis. The experimentally determined spectra of the electron-photon component at distances up to 4 m from the shower axis showed a decrease of electrons and photons with high energies, contrary to predictions of cascade theory. This only holds, if the energy of the central pions responsible for the generation of the electron-photon component is set equal to 10^{12} eV. This contradiction between experiment and theory can be removed, if an essential in-

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Investigation of Extensive Atmospheric Showers of Cosmic Radiation 20-114-5-11/59

Cards 3/4

Investigation of Extensive Atmospheric Showers of Cosmic Radiation 20-114-5-11/59

Cards 4/4

S/048/62/026/005/017/022
B108/B102

3,2410

AUTHORS: Nikol'skiy, S. I., Murzina, Ye. A., Tukish, Ye. I., and Yakovlev, V. I.

TITLE: Nuclear-active particles and high-energy electron-photon avalanches in extensive atmospheric showers of cosmic-ray particles

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 5, 1962, 668-673

TEXT: An ionization chamber and a counter device with a surface area of 25 m^2 were used to measure the total number and energy of shower particles. The errors in measurement varied from 20 to 40%. The energy of electron-photon showers induced by photons of 10^{10} - 10^{12} ev is proportional to the number N of particles. In the present case, it was determined from the ionization under 10 radiation units of lead: $E = 1.2 \cdot 10^8$ N ev. The nuclear-active component was recorded by ionization chambers under a graphite layer (210 g/cm^2) which caused the nuclear-active particles to impart most

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Nuclear-active particles and...

of their energy to the electron-photon component. It is established that the total number of shower particles cannot be determined unambiguously from energy measurements of the electron-photon component in an extensive atmospheric shower of high-energy particles. Discrepancies between experimental and calculated shower spectra are due to nuclear-active particles falling upon the detector. There are 7 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics imeni P. N. Lebedev of the Academy of Sciences USSR)

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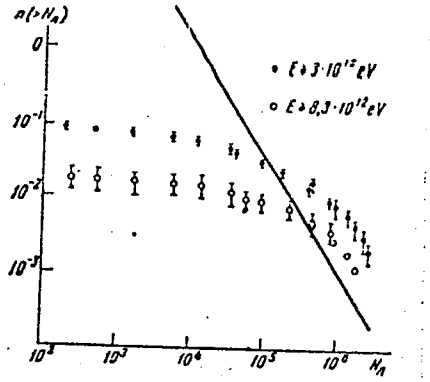

Fig. 4.

Fig. 4. Integral spectrum of extensive showers induced by nuclear-active particles. Straight line: shower spectrum without registration of high-energy nuclear-active particles.

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2c

L 27825-65 EWG(j)/EWT(m)/FCC/T IJP(c)
ACCESSION NR: AT4049951 S/2504/64/026/000/0017/0117

AUTHOR: Vasilov, Yu.N.; Dovzhenko, O.I.; Nesterova, N.M.; Nikol'skiy, S.I.; Pomanskiy, A.A.; Tukish, Ye.I.; Yakovlev, V. I. 62 19 B+1

TITLE: Extensive cosmic ray air showers 19

SOURCE: AN SSSR. Fizicheskiy institut. Trudy*, v. 26, 1964. Kosmicheskiye luchi (Cosmic rays), 17-117

TOPIC TAGS: air shower, cosmic radiation, pi meson, secondary particle, nuclear cascade, nucleon, hodoscopic counter, Wilson chamber, ionization chamber, Cerenkov radiation, cosmic ray burst, air shower core, mu meson

ABSTRACT: The question of air showers is treated at length on the basis of work done from 1952 to 1959. Pp. 18-39 deal with methods of studying extensive air showers. The method used by the 1952 Pamir expedition is described. Individual sections deal with each of the following: the method of correlated hodoscopes used in the measurement of shower particle flux at the observation level; hodoscope detectors of μ-mesons and nuclear-active particles; the use of ionization chambers for the study of air showers; observation of Cerenkov radiation in extensive showers; and the use of the Wilson cloud chamber and scintillation counters in the study of air showers. Pp. 39-72 deal with the composition of extensive air showers.

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L 27825-65

ACCESSION NR: AT4049961

Individual sections are devoted to: radial distribution of charged particles; shower spectra with regard to number of particles at observation height (3860 meters); energy spectra of electron-photon components; energy flux of electron-photon components; radial distribution of nuclear-active particles and their number in showers with various numbers of charged particles at observation level; energy and composition of active particles; radial distribution of μ-mesons and their number in extensive air showers with various numbers of charged particles; μ-meson energy spectra; radial distribution of Cerenkov radiation; energy expended by particles at observation level; and fluctuation of Cerenkov bursts. Pp. 73-92 deal with air-shower cores and high-energy nuclear-active particles with individual sections devoted to: core structure; high-energy nuclear-active particles; fluctuations in energy flux in air-shower cores; and primary cosmic radiation. Pp 92-107 deal with the development of nuclear-cascade avalanches in the atmosphere, with sections devoted to: the nuclear-cascade process and method of evaluating an avalanche; results of calculating shower characteristics (electron-photon component and nuclear-active component); and tracking high-energy particles. Two interpretations of phenomena corresponding to primary cosmic radiation in the 10^{14} to 10^{15} ev energy range are offered: 1) an attempt may be made to explain the change in characteristics of an extensive air shower with a total number of charged particles $N \sim 5^{10}$ by a change in the electrical spectrum and composition of primary cosmic radiation in the corresponding energy interval; 2) either a change

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ACCESSION NR: AT4049951

in or appearance of new auxiliary elementary processes during collision of $10^{14} - 10^{15}$ ev nucleons may be postulated. "Yu. Vavilov, O. Dovzhenko, I. Ivanovskaya, S. Nikol'skiy, Yu. Prokhorov, V. Sarantsev, Ye. Tukish, L. Bilibin, L. Vasil'ev, V. Grishin, B. Zhurkin, V. Kologrivov, A. Kuznetsov, G. Ly*mar', Yu. Plotnikov, A. Smagin and V. Filonov participated in making the measurements in the Pamirs in 1952. The measurements in 1955 and 1957 were carried out by A.Ye. Chudakov, N.M. Nesterova, V.I. Zatsepin, P.V. Vakulov, Ye. I. Tukish, Yu. N. Konovalov and V.Ya. Markov (members of the FIAN), as well as Yu. D. Volkov, Yu. V. Galaktionov, V.L. Dadykin, A.S. Korolev, V.L. Makarevich and other students at Moscow State University. The Cerenkov radiation of extensive atmospheric showers at sea level was measured by members of FIAN and MGU under the guidance of V.I. Zatsepin. The energy of nuclear active particles was calculated by Ye. A. Murzina, while Ye. P. Yudin took part in the calculation of the A2 variant." Orig. art. has: 65 figures, 13 tables and 7 formulas.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 094 OTHER: 040

Card 3/3

L 00542-66 EWT(m)/FCC/T IJP(c)

ACCESSION NR: AP5017950 UR/0367/65/001/006/1079/1092

AUTHOR: Murzina, Ye. A.; Nikol'skiy, S. I.; Tukish, Ye. I.; Yakovlev, V. I.

TITLE: Nuclear-active high-energy particles and the accompanying cosmic ray extensive air showers

SOURCE: Yadernaya fizika, v. 1, no. 6, 1965, 1079-1092

TOPIC TAGS: cosmic ray measurement, cosmic radiation composition, cosmic ray shower, cosmic ray telescope, ionization hodoscope, spectrum analysis

ABSTRACT: The authors report the experimental results on the energy spectrum of nuclear-active particles in the region 3×10^{12} to 10^{14} eV at an elevation of 3860 m above sea level, and on the extensive air showers accompanying these particles. The apparatus is shown schematically in Fig. 1 of the Enclosure and consists of two trays of ionization chambers placed under a thick layer of carbon in a cavity surrounded by lead shielding. These chambers were used to detect the high-energy nuclear-active particles. Two additional trays of ionization chambers, under a relatively thin layer of lead, were placed above the carbon to measure the energy of the electron-photon component of the shower cord. The number of particles in the extensive showers was determined with hodoscopic counters placed both immediately above the block of ionization chambers and at a distance of about 30 meters from the

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ACCESSION NR: AP5017950

center of the apparatus. The measured energy spectrum cannot be described by a power law with a single exponent over the entire energy range. The mean free paths were determined for absorption and for nucleon interaction in the atmosphere, and found to be 120 and 83 g/cm^2 respectively, for particle energies above 10^{13} eV. An analysis of the distribution of the total number of particles of extensive air showers accompanying nuclear-active particles of a given energy in the region $\geq 3 \times 10^{12}$ eV leads to the assumption that a change in the picture of the collision of a nucleon and the air nuclei takes place at an incident-nucleon energy above 10^{13} eV. This change explains the features of the photon energy spectrum in the upper atmosphere and the published data on extensive air showers with 10^4--10^6 particles. Although the spectra of the air showers could also be attributed to a sharp change in the composition of the primary cosmic radiation near 10^{13} eV, the latter assumption is not borne out by direct balloon and rocket data on the composition of the primary radiation. Orig. art. has: 9 figures, 31 formulas, and 3 tables.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

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L 00542-66
ACCESSION NR: AP5017950 ENCLOSURE: 01

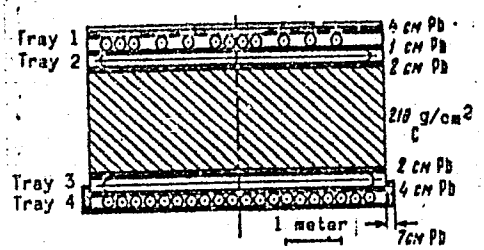

Fig. 1. Detector of nuclear-active particles and of electron-photon showers of high energy.

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Tukish, Ye. I.

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9.9843

AUTHORS: Denisov, Ye. V., Zatsepin, V. I., Nikol'skiy, S. I., Pomanskiy, A. A., Subbotin, B. V., Tukish, Ye. I., Yakovlev, V. I.

TITLE: Observation of nuclear-active particles and electron-photon avalanches with energies greater than 10^{12} ev at a height of 3860 m above sea level

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 2, 1961, 419-425

TEXT: The nuclear-active and electron-photon component of high-energy cosmic radiation were studied to obtain additional data on the nature of nuclear interaction at energies $\geqslant 10^{13}$ ev. The observations were made in 1959 on the Pamir. The detector consisted of four rows in ionization chambers between which were placed lead and carbon, and over which were 10 hodoscope groups containing 12 counters (330 cm^2 each). Besides, two cylindrical chambers were placed at a distance of 7 m from the middle of this setup, a hodoscopic point and detector of the energy density of the

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Observation of nuclear-active...

electron-photon component were at a distance of 18 m from the center and served to study the fluctuations of the particle flux. If the axis of the extensive atmospheric shower hits the recording area of the detector, the number of particles in the shower may be determined from the formula $N = 1000\,\varrho$, where ϱ is the effective particle density of the particle flux per m^2. Assuming that in every event, nucleons and pions impart 1/3 of their energy to the new resulting pions, the energy of the nuclear-active particles was found to be given by $E = 2.3 \cdot 10^8 N^{1.04}$ ev which holds for the range $10^{11}\text{ev} \leqslant E \leq 5 \cdot 10^{14}\text{ev}$. In this energy range, the nuclear interaction cross section does not decrease with the increasing energy of the nucleons involved. From a comparison with the experimental data of other papers, the integral energy spectrum of the nuclear-active particles in the range $10^{12} \div 10^{13}$ev can be expressed in the form $f(E) \sim E^{-n}$, where $n = 1.57 \pm 0.1$. For energies of nuclear-active particles $< 10^{13}$ev, the energy spectra are determined from the spectral form of the primary particles with the help of the mean free path for nucleon interaction and the value of the inelasticity coefficient. In the intermediate range, the

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energy spectrum is not an exponential function, and is determined from the fluctuation in the number of collision events and in the value of the inelasticity coefficient, and also from the accuracy of energy measurement in each individual event of the recording of nuclear-active particles. Professors N. A. Dobrotin and G. T. Zatsepin are thanked for discussions; G. Ya. Goryacheva, G. V. Grishina, G. V. Minayeva, L. A. Miroshnichenko, A. M. Mozhayev, M. M. Nesterova, V. I. Sokolovskiy, and A.Ye. Subbotina are thanked for participation in the work. There are 4 figures and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics imeni P. N. Lebedeva, Academy of Sciences USSR)

SUBMITTED: July 12, 1960

DENISOV, Ye.V.; ZATSEPIN, V.I.; NIKOL'SKIY, S.I.; POMANSKIY, A.A.
SUBBOTIN, B.V.; TUKISH, Ye.I.; YAKOVLEV, V.I.

Observation of nuclear-active particles and electron-proton showers with energies of 10^{12} ev. at an altitude of 3860 m. above sea level. Zhur. eksp. i teor. fiz. 40 no.2:419-425 F '61. (MIRA 14:7)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Particles (Nuclear physics))
(Cosmic rays)

TUKISH, YE. I.

THE SPATIAL DISTRIBUTION OF ENERGY FLUXES OF THE ELECTRON-PHOTON AND NUCLEAR-ACTIVE COMPONENT OF EXTENSIVE AIR SHOWERS AT 3860 METRES ABOVE SEA LEVEL
A.I. Nikolsky and Ye.I. Tukish

1. Experimental data have been obtained by means of a large composite apparatus for studying extensive air showers. A general discription of this equipment was given earlier at the Varenna conference.

Investigations were made of extensive air showers withthe total number of particles $6 \times 10^4 < N < 12 \times 10^4$ and $2 \times 10^5 < N < 4 \times 10^5$. In the case of each registered shower, hodoscope counters were used to determine the position of the shower axis and the total number of charged particles. The energy carried by the electron-photon and nuclear-active components of the shower was determined from the amount of ionization observed in ionization chambers under lead filters 1, 2, 3, 5, 10, 20, 50 and 80 cm thick.

2. On the basis of an analysis of the dependence of the number of particles (registered by the ionization chambers) on the distance from the shower axis and on the thickness of the lead filter, a determination was made of the magnitude of the energy flux carried by the electron-photon component of the shower. For example, in showers with $\sim 10^5$ particles, the energy carried by the electrons and photons at 5 m from the shower axis amounts to $\sim 4 \times 10^8$ ev per charged particle. As the distance from the shower axis increases, the energy per particle diminishes ($\sim 1.8 \times 10^8$ ev for a 10-20 range).

3. At distances of less than one metre from the shower axis the energy carried by the nuclear-active component of the shower considerably exceeds the total energy of the electrons and photons within the same range.

4. The experimental data are correlated with calculations based on the electromagnetic cascade theory and the nuclear-cascade scheme of development of an extensive air shower. The correlation shows that the observed total energy of the electrons and photons in extensive air showers is less than that calculated from the cascade theory for values of primary energy $E_o \sim 10^{12}$ and the parameter $S = 1.2$.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

TUKISH, Ye.I.

VAVILOV, Yu.I.; NIKOL'SKIY, S.I.; TUKISH, Ye.I.; SKOBEL'TSYN, D.V., akademik.

Spatial distribution of charged particlesin the vicinity of the axis of an extensive atmospheric shower of cosmic rays. Dokl.AN SSSR 93 no.2:233-236 N '53. (MLRA 6:10)

1. Fizicheskiy institut imeni P.N.Lebedeva Akademii nauk SSSR. 2. Akademiya nauk SSSR (for Skobel'tsyn). (Cosmic rays)

~~Turkish, Ye.~~ TUKISH, Ye. I.

CARD 1 / 2 PA - 1846

SUBJECT USSR / PHYSICS
AUTHOR DOBROVOL'SKIJ,S.P., NIKOL'SKIJ,S.I., TUKIŠ,E.I., JAKOVLEV,V.I.
TITLE The Spatial Distribution of Broad Atmospheric Showers which are caused by Primary Cosmic Radiation with Different Energies.
PERIODICAL Žurn.eksp.i teor.fis,31, fasc.6, 939-942 (1956)
Issued: 1 / 1957

In the summer of 1954 the authors carried out experiments for the broadening of the energy interval of the broad atmospheric showers under investigation. The spatial distribution of particles was investigated at an altitude of 3860 m above sea level in showers with a primary energy of less than 6.10^{13} and more than 10^{15} eV. In order to be able to measure the great densities of the flows of particles with accuracy, groups of hodoscopic counters with a surface of 16 cm^2 each were used. The average spatial distribution of particles in showers with $1,2.10^6$ particles is illustrated by a diagram. Difficulties arise when investigating showers with less than 10^4 particles because of the low number of particles. On the occasion of the passage of the showers investigated by the authors through the experimental system, discharges occurred in from 4 to 7 of 456 counters. The position of the axis in such showers was determined by means of a group of hodoscopic counters. In all showers investigated the ratio (total number of counters / number of counters recording the passage of a shower particle) was determined at given distances from the axis. The spatial distribution of the particles thus obtained is illustrated in form

Zurn.eksp.i teor.fis,31,fasc.6, 939-942 (1956) CARD 2 / 2 PA - 1846

of a diagram. The experimental results obtained by JU.N.VAVILOV et al. (Dokl. Akad.Nauk, 93, 233 (1953)) agree well with the results obtained by this work. A further diagram illustrates the normalized spatial distribution of the particles in showers, which had been produced by primary particles with different energies. The expected modification of the shape of the function of the spatial distribution of the shower particles was not confirmed by experiment.

The experimental results obtained can be explained as follows: An abnormal high-energy nuclear-active particle present in the stem of the broad atmospheric shower with the primary energy of $< 10^{15}$ eV produces the electron-photon component with high energy in the depth of the atmosphere. This conclusion can be illustrated by comparison of the results obtained here on spatial distribution with the angular distribution of particles on the occasion of nucleon-nucleon interaction observed in photographic emulsions. The major part of the energy liberated on the occasion of primary interaction is carried off by the particles at an angle of $\sim 10^{-4}$ stearad.

INSTITUTION: Physical Institute "P.N.LEBEDEV" of the Academy of Science in the USSR.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757410011-4"

NIKOL'SKIY, S.I.; MURZINA, Ye.A.; TUKISH, Ye.I.; YAKOVLEV, V.I.

Particles with active nuclei and high energy avalanches of electrons and photons in the trunks of wide atmospheric showers of cosmic rays. Izv.AN SSSR.Ser.fiz. 26 no.5:668-673 Ap '62. (MIRA 15:5)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR.
(Cosmic rays) (Electrons) (Photons)

31520
S/627/60/002/000/002/027
D299/D304

3.2410 (1559, 2205, 2805)

AUTHORS: Chudakov, A. Ye., Nesterova, N. M., Zatsepin, V. I., and Tukish, Ye. I.

TITLE: Cherenkov radiation of extensive air showers in cosmic rays

SOURCE: International Conference on Cosmic Radiation. Moscow, 1959. Trudy. v. 2, Shirokiye atmosfernyye livni i kaskadnyye protsessy, 47-55

TEXT: The results are given of measurements carried out in the autumn of 1957 at the Pamir Mountain (3860 m). The apparatus consisted of 10 light detectors and 9 hodoscope units with Geiger counters. Two types of light detectors were used for the measurements. Both types incorporated photomultipliers БС-1 (BS-1) or ФЭУ-24 (FEU-24). The apparatus included 6 detectors of the second type (with mirror). A special electronic circuit permitted measuring the magnitude of the light flares in all the detectors. After processing the data, it was possible to determine for each shower: 1) The

Card 1/3

Cherenkov radiation of ...

intensity of the light flux at 5 points; 2) the density of the particle flow at 9 observation points and hence the position of the shower axis and the total number of particles; 3) the direction of the shower. Various showers were analyzed, with number of particles ranging from $2 \cdot 10^4$ to $1.3 \cdot 10^7$. The dependence of the intensity of the Cherenkov light on the distance from the shower axis was obtained for showers with number of particles N ranging from $2 \cdot 10^4$ to $2 \cdot 10^7$ at intervals of 10 to 250 m. from the axis, and various angles of incidence of the showers. Assuming the relationship $E = AN$, where E is the energy spent by the shower in the atmosphere, one obtains for A approx. 10 ev. Comparing the values of the light flares from showers with different number of particles, it is possible to determine the relationship between E. and N. For showers with $N = 10^5$ to $N = 1.4 \cdot 10^6$, this relationship is $E \sim N^{0.8 \pm 0.05}$. This fact has to be taken into consideration when passing from the number spectrum to the energy spectrum of primary par-

Card 2/3

ticles. Figures show that the relationship between the number of particles and the intensity of the light in the shower varies as a function of the inclination of the shower. The simultaneous measurement of the light intensity at predetermined distance from the axis, and of the total number of particles makes it possible to ascertain (in principle) the role of fluctuations in the development of showers. It was found, by comparing the fluctuations at the Pamir level and at sea level (according to measurements carried out in 1959 at Moscow State University) that the fluctuations have no significant part in explaining the altitude variation of showers. There are 9 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: W. Galbraith, J. V. Jelley. Nature, 171, no. 4347, 349, 1953. / Abstractor's note: Importance of the above investigation is stressed by K. Greisen in his article "Cosmic Ray Showers", Annual Review of Nuclear Science, v. 10, 1960, 63-108; same article also contains a critical appraisal of other results by Soviet investigators, reported in this Trudy. /

Card 3/3

3,2410 (2205, 2705, 2805)

31529
S/627/60/002/000/011/027
D299/D305

AUTHORS: Nikol'skiy, S. I., and Tukish, Ye. I.

TITLE: Distribution of energy flux of electron-photon and nuclearactive component of extensive air showers at an altitude of 3860 m above sea level

SOURCE: International Conference on Cosmic Radiation. Moscow, 1959. Trudy. v. 2. Shirokiye atmosfernyye livni i kaskadnyye protsessy, 139-143

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TEXT: The investigations were carried out at the Pamir Mountain (3860 m). The apparatus was described in detail in publications of the earlier International Conference on Cosmic Radiation (Ref. 1: Dobrotin et al., Nuovo Cim. Suppl., 8, 612, 1958). The density of the energy flow was determined by 12 ionization chambers placed under lead absorbers of various thickness. In some of the experiments, the absorbers were removed. The apparatus permitted determining the density distribution of the energy flow at distances of 0.2 to 30 m.

Card 1/4

Distribution of energy flux ...

from the shower axis (for showers with numbers of particles from $2 \cdot 10^5$ to $4 \cdot 10^5$) and at distances of 0.2 to 20 m from the shower axis (for showers with number of particles from $6 \cdot 10^4$ to $12 \cdot 10^4$). The density of particle flow was defined as the sum of the integrals

$$\rho_E = \beta \int_0^{53} N(t)dt + \beta \int_{53}^{\infty} N(t = 53)e^{-\frac{t}{95}} dt$$

where $\beta = 6.4 \cdot 10^6$ ev. is the critical energy for electrons in lead, t - the absorber depth, and N(t) - the particle-flow density at depth t. A figure shows the density distribution of particle-flow in showers with $\bar{N} = 3 \cdot 10^5$ and $\bar{N} = 10^5$ particles. The obtained distributions are independent of the number of particles in the show-

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Distribution of energy-flux

er, and have the form: $\rho_E \sim r^{-1.8}$ for $0.5 < r < 8$ m, and $\rho_E \sim 1/r^2$ for $8 < r < 30$ m. For small depth t, the contribution by π^0-mesons to the total ionization is small. Hence it is assumed that to a depth t=5 cm Pb, the ionization is entirely due to the electron-photon component. The energy-flow density of the nuclearactive component was determined as the difference between the density of of the total energy flow and the density of the electron-photon component. The energy of the nuclearactive and of the electron-photon component were calculated for a circle of radius R = 30 m, for 2 groups of showers (with $\bar{N} = 3 \cdot 10^5$ and 10^5, respectively). The results are listed in Table 1 (see table). A discrepancy was found between the expected value of 10^{14} ev. of the energy of the nuclearactive component and the experimentally obtained value of $3.3 \cdot 10^{13}$ ev.; this discrepancy cannot be explained by measurement error. The possible source of the error is analyzed. Finally, the mean energy per electron is plotted on a figure (as a function of the distance from the shower axis). There are 4 figures, 1 table and 8 references:

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Distribution of energy-flux ...

7 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Kraybill. Phys. Rev., 93, 1362, 1954.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute im. P. N. Lebedev AS USSR)

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Table 1

N	$3 \cdot 10^4$	10^6
$E_{эф}(30)$	$4{,}5 \cdot 10^{13}$ эВ	$1{,}6 \cdot 10^{13}$ эВ
$E_{эф}(30)$	$3{,}3 \cdot 10^{13}$ эВ	$1{,}1 \cdot 10^{13}$ эВ
$E_{эф}$	$6{,}6 \cdot 10^{13}$ эВ	$2{,}3 \cdot 10^{13}$ эВ
$\frac{E_{эф}(30)}{E_{эф}(30) + E_{эф}}$	0,33	0,33

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31532
S/627/60/002/000/015/027
D299/D304

3.2410 (1559, 2205, 2805)

AUTHORS: Kalachev, B. V., Nikol'skiy, S. I., Pomanskiy, A. A., and Tukish, Ye. I.

TITLE: On fluctuations in the number of μ-mesons in extensive air showers

SOURCE: International Conference on Cosmic Radiation. Moscow, 1959. Trudy. v. 2. Shirokiye atmosfernyy livni i kaskadnyye protsessy, 166-168

TEXT: The results are given of experiments for detecting fluctuations in the number of mesons and electrons in showers with number of particles $10^5 < N < 2 \cdot 10^6$. The experiments were conducted at an altitude of 3860 m (Pamir), in the fall of 1957. The apparatus consisted of hodoscoped counters, placed at 9 observation points. No fluctuations were observed which would have an appreciable effect on the mean values of the investigated quantities. The computed integral number-spectra were compared with the experimental spectra

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On fluctuations in the ...

for various distances from the shower axis. A larger number of showers with number of particles $N \lesssim 10^6$ were observed than was to be expected by the computations. This may be due either to a considerable contribution of showers, in which the density of the μ-meson component exceeds by many times the mean density as determined by Yu. N. Vavilov et al. (Ref. 2: ZhETF, 32, 6, 1319, 1957), or to the mean density having been underestimated. The second possibility is considered in more detail. Denoting the mean number of μ-mesons in the shower by $\bar{N}_\mu = \alpha N^\beta$, one obtains (in the first approximation) the formula

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$$\frac{\Delta c}{c} = \left(n - \frac{\alpha}{\beta}\right)\frac{\Delta\alpha}{\alpha}$$

for $N \lesssim 10^6$; the left-hand side of the formula expresses the relative change in the number of recorded showers, and $\Delta\alpha/\alpha$ expresses the relative error in determining α. For distances of 40-50 m (as well

On fluctuations in the ...

as for other distances), the quantity $\Delta C/C \simeq 0.3$, hence $\Delta\alpha/\alpha \simeq 20\%$, which does not exceed the limits of statistical error. Hence no fluctuations were observed in the experiments conducted, so as to effect the mean values of the quantities. There are 2 figures and 2 Soviet-bloc references.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute P. N. Lebedev AS USSR)

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Card 3/3

VAVILOV, Yu.N.; [illegible], G.I.; [illegible], N.N.; NIKOL'SKIY, S.I.; POMANSKIY, A.A.; YUKIN, Ye.I.; YAKOVLEV, V.I.

Extensive air showers of cosmic rays. Trudy Fiz. Inst. 26: 17-117 '64. (MIRA 17:10)

LAPER'YE, M.A., TUKKEL', T.A.

Hygienic evaluation of instruction at the Leningrad School of Choreography. Trudy LSGMI 45:75-80 '58 (MIRA 11:11)

1. Kafedra gigiyeny detey i podrostkov Leningradskogo sanitarno gigiyenicheskogo meditsinskogo instituta (zav. - kafedroy - prof. A.Ya. Gutkin).
(LENINGRAD--SCHOOL HYGIENE)
(CHOREOGRAPHY--STUDY AND TEACHING)

TUKMACHEV, A.

With the community's help. Voen. znan. 35 no.7:23 Jl '59.
(MIRA 12:12)

1.Predsedatel' komiteta pervichnoy organizatsii Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu Ural'skogo zavoda khimicheskogo mashinostroyeniya, g. Sverdlovsk.
(Ural Mountain region--Military education)

TUKMACHEV, L.M., zasluzhennyy uchitel shkoly RSFSR

Regenerating the electrolytes of alkaline storage cells. Khim. v shkole 18 no.6:67-70 N-D '63. (MIRA 17:1)

1. Zalazninskaya srednyaya shkola Kirovskoy oblasti.

TUKMACHEV, L.[illegible]. (Omutninskiy rayon, Kirovskaya oblast')

Home-made photocolorimeter. Politekh.obuch. no.4:74-76 Ap '58.
(MIRA 12:7)

(Colorimetry)

TUKIAN, R.M., inzh.

Fastening the load for dynamic balancing of cage rotors. Vest. elektroprom. 29 no.3:63 Mr '58. (MIRA 11:4)

1. Zavod "Vol'ta."

(Balancing of machinery)

KOL'MAN, E., prof.; GORPINICH, K.Ye., uchitel'; SHTEPAN, V.Ye., prepodavatel' teoreticheskoy mekhaniki; VLASOV, O.Ye., prof. (Moskva); MERKULOV, I.T. (Ul'yanovsk); KUTSEV, M.M. (Kuybyshev); CHAPTYKOV, P.G. (Leningrad); DEMIN, V.N. (Tashkent); TUKMAN, R.E. (Tallin); GERTS, G., doktor fizicheskikh nauk, dotsent; DUDEL', S.P., doktor filosof. nauk, prof. (Moskva)

Finiteness and infinity in the universe; survey of letters and articles received by the editor. Priroda 54 no.8:97-102 Ag '65. (MIRA 18:8)

1. Shkola No.8 g. Kremenchuga (for Gorpinich). 2. Krasnoyarskiy politekhnicheskiy institut (for Shtepan). 3. Filosofskiy fakul'tet universiteta im. Gumbol'dta, Berlin, Germanskaya Demokraticheskaya Respublika (for Gerts).

Tukhish, E.A.

FLUCTUATIONS IN FLUX DENSITIES OF MU-MESONS IN AIR SHOWERS AT 3860m ABOVE SEA LEVEL

S.I. Nikolsky, A.A. Pomansky, E.A. Tukhish

I. Fluctuations in the density of nu-mesons have been studied by the statistical method in the interval of 20-60 m from the axes of extensive air showers with the total number of particles $\geq 10^5$. Discharge coincidences were registered in three groups of counters placed under a filter made of 25 cm of lead and 2 cm of iron. Each group was $\sim 0.8\ m^2$ in area. The position of the axis and the total number of determined by means of hodoscope counters placed in 9 points.

2. A comparison of the observed spectrum of extensive air showers that accompany triple coincidences produced by mu-mesons (and nuclear-active particles), with the spectrum calculated with account taken of the statistical distribution of mu-mesons in the shower, shows the absence of significant fluctuations in the number of mu-mesons in extensive showers with the number of particles $\Rightarrow 3 \times 10^5$.

Report presented at the International Cosmic Ray Conference, Moscow 6-II July 1959

GORNER, Fridrich; TUKOROVA, Jurina

Complexometric verification of the direct determination of calcium content in milk. Prum potravin 15 no.8:424-426 Ag '64.

1. Chair of Technical Microbiology and Biochemistry, Slovak Higher School of Technology, Bratislava.

ACCESSION NR: AT4043275 S/2744/64/000/007/0083/0094

AUTHOR: Vol'f, M. B., Grudnikov, I. B., Prokopyuk, L. G., Plan, M. A., Tukov, G. V.

TITLE: Removal of carbon dioxide and sulfur compounds from ethylene by means of synthetic zeolites

SOURCE: Ufa. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti. Trudy*, no. 7, 1964. Sernisty*ye nefti i produkty* ikh pererabotki (Sour crude oil and products of refining), 83-94

TOPIC TAGS: zeolite, carbon dioxide, ethylene, sulfur synthetic zeolite, adsorption column, acetylene, ethylene purification, molecular sieve

ABSTRACT: An investigation of different molecular sieves made at the Gor'kovskaya eksperimental'naya baza (Gor'kiy Experimental Plant) of the VNII NP for the removal of carbon dioxide from ethylene by adsorption showed that the most effective zeolite samples were of the type CaA, NaA being less effective and CaX and NaX being unsuitable for the purification. Using CaA zeolite, optimal results were obtained at a volumetric rate of 1200-9000 liter/liter per hour (linear rate of 0.008-0.05 m/sec. A decrease in temperature from 36 to 3C improved the adsorption properties of CaA zeolite with respect to carbon dioxide. Adsorption on zeolite CaA in one cycle at 22 atm. and 3C, at a rate of

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ACCESSION NR: AT4043275

1200-9000 hr.$^{-1}$, decreased the carbon dioxide content from 0.02-0.04% to 0.001%. In order to decrease the amount of sulfur compounds from 1-8 to 0.5 mg/mm^3, up to 30,000 liters of ethylene can be processed with 1 liter of zeolite in one cycle of adsorption. The operation of the adsorption column is shown schematically. The influence of the particle size of the zeolite on the degree of purification was also investigated. Comparison of the results of adsorption with ordinary granules and with adsorbents ground to 1-2 mm showed that the ground zeolite is much more effective than the granulated one. The sulfur content of ethylene before and after purification with zeolites is shown in a table. The desorption of the gases adsorbed on zeolites, including ethylene, can be accomplished by bubbling through a methane-hydrogen mixture at atmospheric pressure and 240-300C, using a mixture of 600-800 liters per liter of zeolite. After desorption, the molecular sieves regain their adsorptive properties. The use of zeolites for removing impurities from ethylene makes it possible to reject the use of aklaline purification completely and to obtain ethylene of a higher degree of purity. The adsorption of acetylene from ethylene before its hydrogenation does not give a sufficiently high degree of separation; hence it cannot be recommended for industrial use. Orig. art. has: 8 figures, 2 tables and 1 chemical equation.

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ACCESSION NR: AT4043275

ASSOCIATION: Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti, Ufa (Bashkir Scientific Research Institute for Petroleum Refining)

SUBMITTED: 00

ENCL: 00

SUB CODE: OC, FP

NO REF SOV: 009

OTHER: 006

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Card

VOL'F, M.B.; GRUDNIKOV, I.B.; PROKOPYUK, L.G.; PLAN, M.A.; TUKOV, G.V.

Use of molecular sieves for an advanced stage of ethylene refining.
Khim.i tekh.topl.i masel 8 no.8:23-30 Ag '63. (MIRA 16:9)

1. Bashkirskiy neftyanoy nauchno-issledovatel'skiy institut.
(Ethylene) (Zeolites)

TUKOV, R., inzhener-podpolkovnik

Transportation of "Polaris" rockets. Tyl i snab.Sov.Voor.Sil 21 no.1:94 Ja '61. (MIRA 14:6)
(Guided missiles)
(Rockets (Ordnance)--Transportation))

TUKOV, K.A.

ALICHKIN, S.L.; AGRINSKIY, N.I.; ANDREYEV, G.F.; BAKUMENKO, G.D.; VORONTSOV, S.M.; VOYSTRIKOV, I.V.; GRADYUSHKO, G.M.; ZYKOV, A.V. IVANOVTSEV, P.V.; KINBURG, M.Ya.; KOVALEV, P.A.; KOZLOVSKIY, Ye.V. KORNIYENKO, A.P.; KOLYAKOV, Ya.Ye.; LAKTIONOV, A.M.; LEVADNYY, B.A. MEDVEDEV, I.D.; NOVIKOV, N.V.; ORLOV, F.M.; OSTROVSKIY, A.A.; ORTSEV, V.P.; PENIC[illegible]KO, A.M.; POLOZ, D.D.; PRITULIN, P.I.; PETUKHOVSKIY, A.A.; [illegible]ALEV, G.T.; RYBAK, P.Ya.; SUTYAGIN, G.P. TUKOV, K.A.; KHAVCHENKO, D.F.; CHERNETSKIY, T.I.; SHPAYER, N.M. SHUSTOVSKIY, F.A.

Nikolai Vasil'evich Spesivtsev. Veterinariia 35 no.2:96 F '58. (MIRA 11:2)
(Spesivtsev, Nikolai Vasil'evich, 1901-1957)

ZAKHAROV, P. (Leningrad); LOZIKOV, G., aviatekhnik (Dushanbe); FINOGENOV, N. (Petrozavodsk); FANDIKOV, V., komandir samoleta (Urgench); TUKOV, V.

Brief news. Grazhd. av. 20 no.9:25 S '63. (MIRA 16:8)

1. Nachal'nik shtaba Estonskoy otdel'noy aviatsionnoy gruppy (for Tukov).

(Aeronautics)

TUKOV, V.; OVSYUKOV, A.; KLIMENKO, M.

Competition for the title "brigades of Communist Labor." Avt. transp. 37 no.4:53 Ap '59. (MIRA 12:6)

1. Nachal'nik shorochnogo tsekha avtoremontnogo zavoda Leningradskogo upravleniya avtotransporta (for Tukov). 2. Upravlyayushchiy Omskim avtotrestom (for Ovsyukov). 3. Chlen mestkoma avtokolonny No.20, Novocherkassk (for Klimenko).
(Socialist competition)

RUBAN, A.M., inzhener; TUKOV, V.G.

Casting the casings of hydraulic distributors at the "Krasnyi Ekskavator" Plant. Stroi.i dor.mashinostr. 2 no.7:34 Jl '57. (MLRA 10:7)

(Excavating machinery) (Founding)

TUKOV, V.G., inzhener; [illegible]SHCHINSKIY, S.I., inzhener; BASSIN, F.I., inzhener.

Using cement-gypsum plates and reusable frames in machine molding. Lit.proizv. no.6:28-29 Je '56. (MLRA 9:8)
(Machine molding)

AUTHORS: Tolf, M. E.; Brudnikov, I. B.; Prokopyuk, L. D.; Plan, V. A.; Tarov, [illegible]

TITLE: Utilization of molecular sieves for fine purification of ethylene

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 8, 1963, 23-30

TOPIC TAGS: ethylene, molecular sieve, ethylene purification, zeolite, CaA, NaA

ABSTRACT: This investigation was carried out to learn the conditions under which zeolites can be used for a fine purification of ethylene. The investigation showed that the most effective zeolites are CaA, less effective are NaA. Ones which are not suitable for the purification method are CaX and NaX. Desorption of gases, including ethylene, from the zeolite is accomplished by blowing a methane-hydrogen mixture through it at atmospheric pressure at 240-300C in an amount of 600-800 l/l of zeolite. The obtained data can be applied in the development of a process for a fine purification of ethylene by means of molecular sieves. Using zeolite CaA at a pressure of 22 atm. and 3C with a volumetric rate of 1200 to 9000 l/l hr, the CO_2 content in 12,000 liters of ethylene/l of zeolite

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ACCESSION NR: AP3004532

is lowered from 0.02-0.04 to 0.001% by volume. The sulfur content is lowered from 1-8 mg to 0.5 mg of sulfur for 1 m^3 of ethylene. Periodical regeneration of zeolite at 400C may be accomplished with N_2 or some other inert gas mixed with O_2. The use of zeolites for the purification of ethylene will completely eliminate its purification with alkali and it will be possible to obtain ethylene of higher purity. Orig. art. has: 2 tables and 5 figures.

ASSOCIATION: BashNII

SUBMITTED: 00 DATE ACQ: 27Aug63 ENCL: 00

SUB CODE: PH, CH NO REF SOV: 008 OTHER: 002

Card 2/2

TUR'YAN, Ya.I.; VAKHRUSHEV, Yu.A.; Prinimali uchastiye: ZAYTSEVA, Z.V.; TUKOVA, A.V.

Polarographic analysis of a mixture of terephthalic, p-toluic, nitroterephthalic, and 3-nitro-p-toluic acids. Zhur.anal.khim. 17 no.1:121-125 Ja-F '62. (MIRA 15:2)

1. Institute of Nitrogen Industry, Lisichansk Branch.
(Terephthalic acid) (Toluic acid) (Polarography)

IZMER, I., kand.tekh.nauk; MOROZOV, Ye.M., inzh.; TUKOVSKAYA, V.V., inzh.

Interchangeable equipment for ETU-353 excavators for digging canals with trapezoidal sections. Stroi. i dor. mashinostr. 5 no.8:14-16 Ag '60. (MIRA 13:8)
(Excavating machinery--Equipment and supplies)

EXCERPTA MEDICA Sec.11 Vol.10/9 Oto-Rhino-Laryngo Sept57
TUKOVSKIY M.A.

1671. TUKOVSKIY M. A. Dept. of Rheumatol., Ped. Inst., Acad. of Med. Sci. of the USSR, Moscow. *Treatment of chronic tonsillitis in children with various antibiotics (Russian text) PEDIATRIJA 1956, 2 (38-43)

It was shown that, in 92 children, penicillin and albomycin had almost no activity against the flora of the pharynx. These organisms were shown to be most sensitive to streptomycin and chloramphenicol and somewhat less so to chlortetracycline. The administration of suitable antibiotics gave a good and persistent therapeutic result. Children from 7 to 10 yr. received from 100,000 U. to 125,000 U. streptomycin twice daily as inhalations, and parenteral chloramphenicol up to 150 mg. 3 times in the course of 10 to 12 days. It must be added that in some cases a lowering of sensitivity to the antibiotic in use was observed.

Kvasnaya - Leningrad (XX,7,11)

SATEL', E.A., zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn.nauk, prof.; PODURAYEV, V.N., kand.tekhn.nauk, dotsent; TUKTANOV, A.G., inzh.; SUVOROV, A.A., inzh.

Vibration drilling of holes in stainless and heat-resistant steels. Vest.mash. 42 no.1:67-70 Ja '62. (MIRA 15:1)
(Drilling and boring)

30437

S/122/62/000/001/004/005
D221/D304

AUTHORS: Satel', E.A., Honored Scientist and Technician, Doctor of Technical Sciences, Professor, Podurayev, V.N., Candidate of Technical Sciences, Docent, Tuktanov, A.G., and Suvorov, A.A., Engineers

TITLE: Vibratory drilling of holes in stainless and heat resisting steels

PERIODICAL: Vestnik mashinostroyeniya, no. 1, 1962, 67-70

TEXT: The MVTU imeni Baumana (MVTU im. Bauman) carried out research on vibratory drilling, where the tool receives axial oscillations. This produces small chips which are easily removed so that mechanized feed and automation of the process become feasible. The special vibratory drilling machine increased the efficiency by 2.5 times and prolonged the tool life 3 times when machining nuts in 1Kh18N9T (1Kh18N9T) steel. The sinusoidal axial oscillations of the drill with an amplitude a and frequency ω distort the usual helical motion of the cutting edge of the

Card 1/4

Vibratory drilling ...

tool. The equations of motion of the latter in cylindrical coordinates are $r = \frac{d}{2}$; $\varphi = \omega_n t$; $X_A = v_s t + a \sin \omega_f t$. After some manipulations,

Eq.(4) $$s_t = X_B - X_A = \frac{s_0}{2} + 2a \cos \frac{\omega_f}{\omega_n}\left(\varphi + \frac{\pi}{2}\right) \sin \frac{\omega_f}{\omega_n} \cdot \frac{\pi}{2}. \quad (4)$$ is obtained which gives the current feed s_t. Analysis of the vibratory drilling has revealed that for a given amplitude the fractioning of the chips is best, when there is a certain ratio between the number of revolutions of the tool and the frequency of vibrations. Similar results are obtained during drilling, characterized by two simultaneously oscillating cutting edges. If during a half-turn of the drill there are k full periods of oscillations and a remaining part of a period l, Eq. (7)

$$s_t = \frac{s_0}{2} + 2a \cos 2(k+l)\left(\varphi + \frac{\pi}{2}\right) \times \sin 2(k+l)\frac{\pi}{2}. \quad (7)$$

In the experiments, the frequency was 200 cycles, n=2800 rpm; the chip

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S/122/62/000/001/004/005
D221/D304

Vibratory drilling ...

was broken into about four parts during one revolution of the drill. Motion of the chip in the grooves of the drill is facilitated by reduction of the friction coefficient due to the mechanics of displacement of granulated bodies on vibrating surfaces. The second factor which increases the efficiency, is due to the kinematics of the process of cutting. If the radius of curvature of the cutting edge is commensurate with the thickness of the chip (which is the case in drilling holes of small diameter) there is an intense work hardening of metal. Measurement of torque and axial forces revealed a reduction of the cutting force P_z when the feed increased up to a certain value; further increase of the feed leads to larger forces. The third factor is due to changes in the physical process of plastic deformation caused by a variable load. The speed of the drill is composed of rotational and feed components that are constant, and a superimposed oscillatory part. This results in slight alteration of the machining speed, as well as in marked changes of the cutting angles. Deformation of the metal is then changed, and the chip becomes fractured. This is especially important for stainless and heat resisting steels which are more susceptible to work hardening.

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31437

S/122/62/000/001/004/005
D221/D304

Vibratory drilling ...

On the basis of accumulated experience, the MVTU im. Bauman has designed a drill with an electromagnetic vibrator for nut machining, and a two-spindle unit made in cooperation with Izhevskiy mashinostroitel'nyy zavod (Izhevsk Engineering Plant). The system used allows a simultaneous axial vibration of the drill. An eccentricity permits alignment of spindle within 0.01 mm. The required oscillations are produced by an electrodynamic vibrator, whose coil is fed by a frequency changer, and controlled by a rheostat. A description is given of the machine operation. The MVTU im. Bauman has also developed a semi-automatic two-spindle unit with stepless regulation of speed. A mention is made of a drill made by MVTU im. Bauman in collaboration with Izhevsk Engineering plant for vibratory drilling of holes of 5-8 mm dia., with an electro-hydraulic vibrator. Its tests proved to be satisfactory. There are 4 figures and 5 Soviet-bloc references.

Card 4/4

GERASIMOV, Yu.S.; KUPTSOVA, A.B.; MAYDANYUK, V.D.

Distribution of the abundance ratios of uranium in the boundaries of the Ukrainian Crystalline Shield. Geofiz. sbor. no.9:91-96 '64. (MIRA 18:6)

1. Institut geofiziki AN UkrSSR.

TUKTAROVA, L.S.

Effect of X irradiation on the cell parameter and thermal expansion of triglycine sulfate crystals. Kristallografiia 10 no.3:433-435 My-Je '65. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

BERIM, M.G.; BRUDNAYA, K.B.; RZHEVSKAYA, G.F.; TUKTAROVA, Sh.Z.

Antimicrobial effect of the esters of amidophosphonoformic acid, phosphorylated acetals and hydrazones. Nauch. trudy Kaz. gos. med. inst. 14:99-100 '64. (MIRA 18:9)

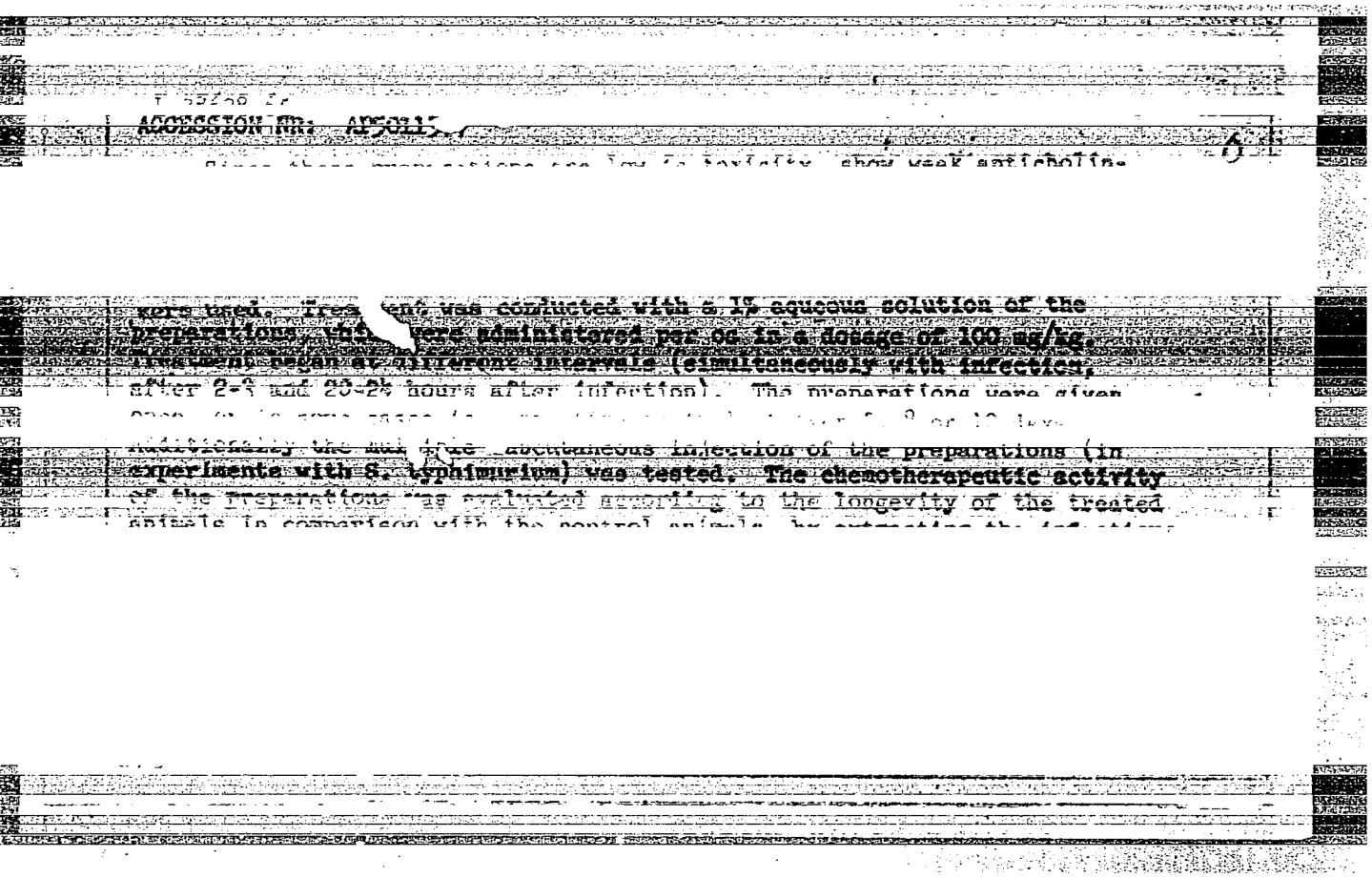
1. Kafedra mikrobiologii (zav. - dotsent Z.Kh.Karimova) i kafedra farmakologii (zav. - dotsent T.V.Raspopova) Kazanskogo meditsinskogo instituta.

TUKTAROVA, Sh.Z.

Antimicrobial effect of some organophosphorus compounds on freshly isolated Proteus strains. Nauch. trudy Kaz. gos. med. inst. 14:297-298 '64. (MIRA 18:9)

1. Kafedra mikrobiologii (zav. - dotsent Z.Kh.Karimova) Kazanskogo meditsinskogo instituta.

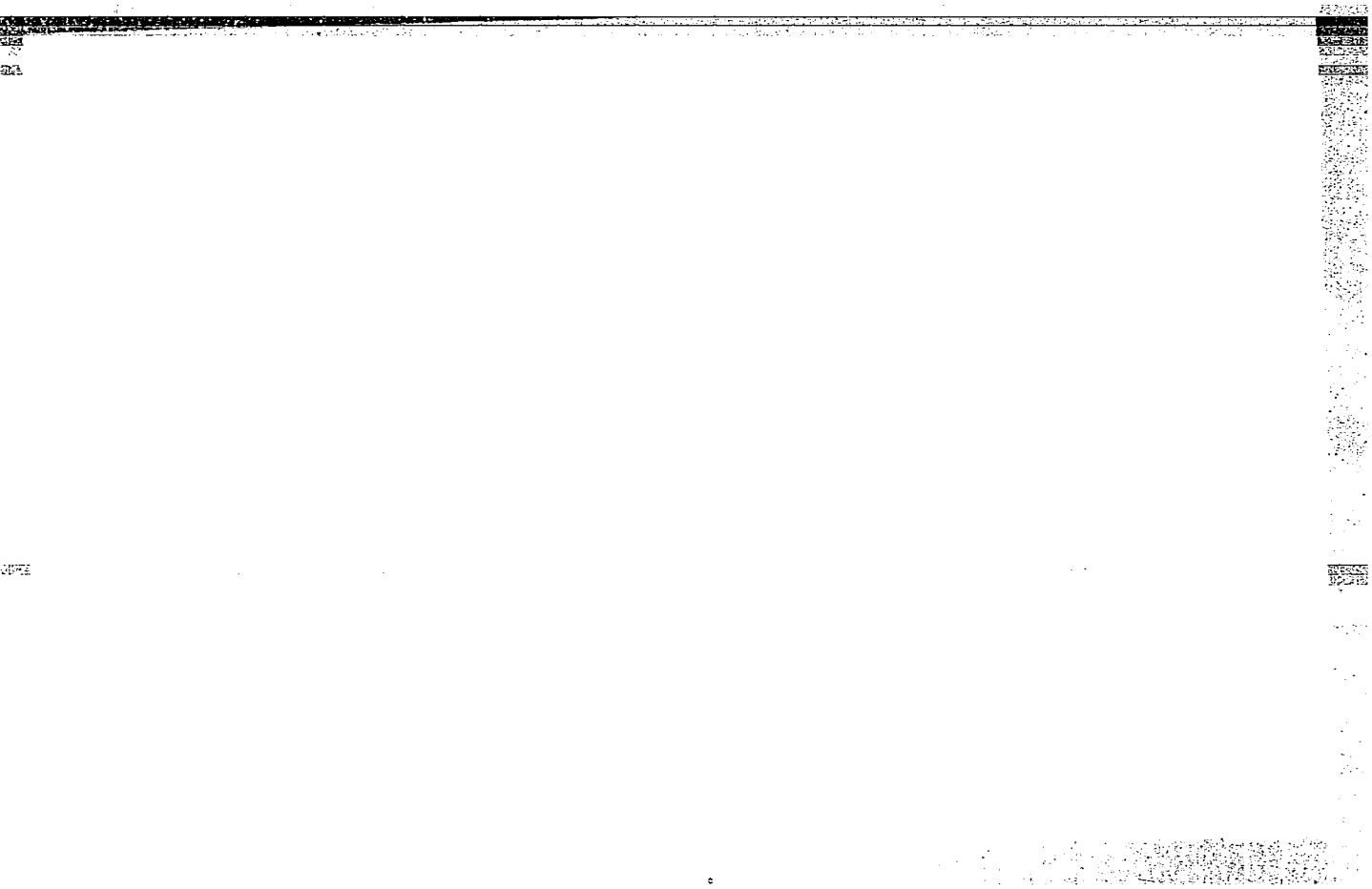
APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001757410011-4"



ACCESSION NR: AP5021[illegible]

[illegible] show weak antibiotic

[illegible] were used. Treatment was conducted with a 1% aqueous solution of the preparations that were administered per os in a dosage of 100 mg/kg. Treatment began at different intervals (simultaneously with infection, after 2-3 and 20-24 hours after infection). The preparations were given [illegible] subcutaneous injection of the preparations (in experiments with S. typhimurium) was tested. The chemotherapeutic activity of the preparations was evaluated according to the longevity of the treated animals in comparison with the control animals, by estimating the [illegible]



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L 29965-66 EWT(1)/T JK

ACC NR: AR6004358 SOURCE CODE: UR/0299/65/000/019/B042/B042

AUTHOR: Berim, M. G.; Brudnaya, K. B.; Rzhevskaya, G. F.; Tuktarova, Sh. Z.

TITLE: Problem of the antibacterial action of amidophosphonoformic ester, phosphorilated acetals and hydrazones

SOURCE: Ref. zh. Biologiya, Abs. 19B272

REF SOURCE: Nauchn. tr. Kazansk. med. in-t, v. 14, 1964, 99-100

TOPIC TAGS: ~~organic chemistry~~, bactericide, organic phosphorus compound, ester, acetal

ABSTRACT: The antibacterial effect of amidophosphonoformic ester, phosphorilated hydrazones and phosphorilated acetals are studied. Some serotype (O-111, O-26, O-55) intestinal bacteria, proteus vulfaricus, stimulants of typhoid fever, dysentery, murine typhus, staphylococcus, streptococcus, and also diphtheria stimulators ~~of~~ bacteria were used. The latter microorganism was shown to be the most sensitive to the compounds in question. The addition of chlorine atom to the alkyl radical, or an increase in the carbon atom number in it does not

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L 29965-66
ACC NR: AR6004358

increase the antibacterial action of amidophosphonoformic esters. The presence of a double bond in the alkyl radical increases the antibacterial action. The same is true regarding the introduction of a metoxy-group into phenyl radical. Preparation No.16: 3,3dimetoxyphenyl-4,4-bis-amidophosphonoformic dimethyl ester proved to be the most active of all the investigated phosphoroorganic compounds. Phosphorilayed hydrazones showed a slight antibacterial action, whereas the acetals are not active at all.

N. Blinov

SUB CODE: 06,07/ SUBM DATE: none

Card 2/2 CC

NELLIN, V.I., kand. tekhn. nauk; TUKTAYEV, I.I., kand. tekhn. nauk; LOZHKIN, L.V., inzh.

Effect of external vibrations on the sparking of low power collector-type machines. Elektrotekhnika. 36 no.9:49-53 S '65. (MIRA 18:9)

L 1691-66 EWT(1)/EPA(s)-2

ACCESSION NR: AP5017455 UR/0144/65/000/006/0690/0693 G
621.3.047.44621.313 8
B

AUTHOR: Tuktayev, I. I. (Candidate of technical sciences, Senior research associate); Bogatyrev, N. Ya. (Chief of dept)

TITLE: Effect of the brush-contact shape on the operation of a flat sliding contact

SOURCE: IVUZ. Elektromekhanika, no. 6, 1965, 690-693

TOPIC TAGS: electric machine brush

ABSTRACT: Actual commutation time was measured at 750-1500 rpm, with a current density of 4—17 amp/cm², and 2—6 turns in the armature coil; the commutation time for a disk-type commutator was found to be 1.5—3 times as long as that for a cylindrical commutator. The effect of the brush contacting-surface shape on commutation (sparking) was studied* on a MGS-7, 8x20x26-mm rectangular-cross-section brush whose shape was successively reduced to a semi-circle, a trapezoid, a rhomb, a circle, and a triangle, the sparking diminishing in the above order of shapes. On a disk-type commutator, at current densities up to 30 amp/cm², the rectangualr cross-section brush exhibited considerably smaller sparking than a trapezoid brush whose shape followed the disk-commutator-bar shape.

Card 1/2

L 1691-66

ACCESSION NR: AP5017465

Orig. art. has: 4 figures.

* Jointly with L. V. Lobashevskiy.

ASSOCIATION: Tomskiy filial, Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki (Tomsk Branch, All-Union Scientific Research Elektromechanical Institute)

SUBMITTED: 14Jan64 ENCL: 00 SUB CODE: EE

NO REF SOV: 004 OTHER: 001

Card 2/2

KIRIK, A.M.; TUKTAYEV, I.I.

Convective coefficient of heat transfer at low pressure. Izv.vys.ucheb. zav.;prib. 7 no.5:141-143 '64. (MIRA 17:12)

1. Rekomendovano mezhvuzovskoy konferentsiyey po teplovym rezhimam radioelektronnykh ustroystv (detaley i apparatov).

NELLIN, V.I., kand. tekhn. nauk; TUKTAYEV, I.I., kand. tekhn. nauk;
BOGATYREV, N.Ya., inzh.

Concerning the article "Vibration of the brush assembly".
Elektrotekhnika 35 no.10:35-36 O '64.
(MIRA 17:11)

TUKTAYEV, I.

Wheel-changing pit. Avt.transp. 34 no.9:15-16 S '56. (MLRA 9:11)
(Automobiles--Wheels)

TUKTAYEV, I.

Hydraulic dismantling cart. Avt.,transp. 40 no.11:50-51 N '62. (MIRA 15:12)
(Oil-hydraulic machinery)

NELLIN, V.I., kand. tekhn. nauk; TUKTAYEV, I.I., kand. tekhn. nauk; BOGATYREV, N.Ya., inzh.

Operation of the brush contact of an electrical machine at increased current densities. Elektrotekhnika 35 no.7:39 '64. (MIRA 17:11)

ZHARKOV, Nikolay Danilovich; TUKTAYEV, Igor' Izmaylovich, kand. tekhn. nauk

Study of the mechanical strength of the collectors of small electrical machines. Izv. vys. ucheb. zav.; elektromekh. 5 no.11:1311-1316 '62. (MIRA 16:1)

1. Vedushchiye konstruktory filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta elektromekhaniki.

(Electric machinery) (Commutation(Electricity))

TUKTAYEV, Igor' Izmaylovich, inzh.; MAL'TSEV, Pavel Timofeyevich, starshiy prepodavatel'

Effect of certain mechanical factors on the operation of a slide contact. Izv. vys. uchob. zav.; elektromekh. 5 no.7: 824-834 '62. (MIRA 15:10)

1. Tomskiy politekhnicheskiy institut (for Tuktayev). 2. Kafedra prikladnoy mekhaniki Tomskogo politekhnicheskogo instituta (for Mal'tsev).

(Electric machinery) (Brushes, Electric)

KARASEV, M.F.; LOBACHEVSKIY, L.V.; TUKTAYEV, I.I.

Composite brushes of d.c. machines. Trudy TZIIZHT 35:18-36 '62. (MIRA 16:8)

(Brushes, Electric) (Electric machinery--Direct current)